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PUC PROJECT NO. 51840

RULEMAKING ESTABLISHING ELECTRIC WEATHERIZATION STANDARDS	§ § §	**PUBLIC UTILITY COMMISSION OF TEXAS**

CALPINE CORPORATION'S COMMENTS REGARDING THE STAFF QUESTIONS

Calpine Corporation ("Calpine") is headquartered in Houston and has a geographically diverse fleet across 22 states with significant scale in the ERCOT, CAISO, and PJM competitive wholesale markets. Our Texas fleet utilizes combined cycle and cogeneration technologies and supplies approximately 9,000 MW of generation to the ERCOT wholesale market. Our Texas plant locations are in and around Houston, Central Texas, Corpus Christi, and the Rio Grande Valley. We take great pride in owning and operating a modern, clean, environmentally efficient, and reliable fleet and seek to be a positive contributor in the communities where our plants are located. We understand the urgency with which the Commission has been tasked to fulfill the requirements of Texas Utilities Code § 35.0021(b) and appreciate the opportunity to provide feedback regarding weatherization standards applicable to electric generators. As these comments are filed on or before June 23, 2021, they are timely submitted.

I. Background

Before addressing generation weatherization standards generally, Calpine points out that a majority of the systemic problems experienced during Winter Storm Uri could be significantly eliminated or significantly improved at little or no cost. For example, many power plants were unable to generate because of a lack of natural gas. Natural gas for those plants, in turn, was unavailable because facilities, such as gas compressor stations, required electricity to operate, but were curtailed by the local distribution companies. Ensuring these gas facilities are on critical

infrastructure lists going forward is essential, and recently passed Senate Bill 3 ("SB3") requires it. Other critical items that can be fixed at low cost, that are also addressed in SB3 include, improved gas electric coordination, improved emergency communications, improved load shed planning, and coordination among key state agencies. These items together would have lessened the impact of Winter Storm Uri.

It is also important to note that generation facilities across the country are designed based on predominant weather conditions in the location in which they operate. For example, Calpine owns 10,000 MW of electric generating facilities in the Mid-Atlantic and Northeastern US, many of which are fully enclosed to protect against winter weather. In addition, because the natural gas pipeline system is not as robust in many places in those regions as it is in Texas, many of Calpine's Mid-Atlantic and Northeast facilities are able to switch to oil, and have backup oil tanks onsite. Conversely, in Texas, Calpine's generation assets were designed for the extreme heat and humidity to serve peak summer loads.

The winter storm of 2011 that impacted Texas resulted in at least three different analyses[1] and through those analyses, a set of general weatherization guidelines was developed, including a PUCT and ERCOT oversight process for ensuring generators were following these guidelines. Calpine, in fact, made winter-related improvements to its physical facilities and operational processes to comport with the established guidelines, and has a robust weatherization process for both summer and winter. For example, Calpine follows readiness checklists before the winter

[1] *See Report on Extreme Weather Preparedness Best Practices*, Project No. 39646 (Sept. 27, 2012) (AIS Item 10) (Quanta Report); *Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5 2011: Causes and Recommendations* at 10 (Aug. 2011) (NERC Report); and Calpine, CPS Energy, LCRA, Luminant, NRG Energy, *Winter Weather Readiness for Texas Generators – Extreme Winter Weather Event Management Review by Some Texas Generation Plant Operators* (each report available on request).

season, which includes such items as heat-tracing and O'Brien boxes to shield equipment from wind.

Winter Storm Uri – with sleet, snow, ice, wind, and temperatures below freezing for five days – presented conditions that challenged the entire industry despite extensive preparations developed after the 2011 event. Like all industry participants, because of Winter Storm Uri, Calpine is reviewing its lessons learned and developing areas of improvement. However, Calpine cautions the Commission against a mandatory one-size-fits-all approach to weatherization in reaction to this event. The generation fleet in Texas is so diverse, spanning hundreds of miles that no single solution will work because not all areas and units are the same.

Critically, it is important to note that many weatherization recommendations result in a tradeoff of improved winter performance for inferior summer performance. For example, simplistic solutions such as building enclosures at enormous cost around the state's existing generation fleet could improve winter performance, but are likely to degrade summer performance, when it is critical to dissipate heat as quickly as possible. However, other solutions may provide more benefit, like developing ancillary services to support dispatchable resources to procure firm fuel for extreme winter weather supply, a solution recognized in SB3. Calpine looks forward to participating in the Commission project to develop the requirements and qualifications to support this ancillary services product. Moreover, the comprehensive Texas pipeline system is much more likely to work if gas/electric coordination is improved, including the development and maintenance of an LDC critical infrastructure list. Not every recommendation is practical (physically or economically) for every entity and every operating unit. As such, the Commission should exercise caution and develop flexible standards that account for unique operating designs and circumstances of each generating unit.

Finally, as NERC recognized in its report on the 2011 freeze, generators should be accorded a cost recovery mechanism to facilitate development and deployment of these extreme weather measures.[2] SB3 represents a societal judgment that mandates investment in additional extreme weather protections. As such, the incremental costs associated with these measures are appropriate for cost recovery, particularly for standards not in effect when generation companies invested in and developed their existing generation assets, when heightened standards were not applicable nor could be reasonably predicted. Like many generators, Calpine is concerned that certain improvements may result in facilities becoming un-economical, exacerbating the reliability issue. Thus, as a step to ensuring reliability of the entire ERCOT system, cost recovery, or as an alternative an economic based exception process, is essential.

II. Response to Specific Questions

1. ***To fulfill the requirements of Texas Utilities Code § 35.0021(b), under what weather emergency conditions should the Commission require a provider of electric generation service in the Electric Reliability Council of Texas (ERCOT) power region to be able to operate its generation facilities? At a minimum, please address standards for temperature, icing, wind, flooding, and drought conditions. For each, please address whether the standard should vary by region or by type of generation facility. Please provide any relevant support for your recommendations, including existing or proposed standards in other jurisdictions, or related studies.***

Calpine believes generation providers should prepare facilities for reasonably anticipated severe weather conditions with auditable guidelines to address the uniqueness of each resource and location. A one-size-fits-all approach is not reasonable given the vast differences in resource type, vintage, design criteria, operating conditions, and location. Calpine additionally recommends adoption of the NERC Reliability Guideline: Generating Unit Winter Weather

[2] NERC Report at 202.

Readiness – Current Industry Practices (Version 3)[3] as it incorporates industry best practice and can be used by the Commission to comply with the Legislative directive quickly and easily. More specifically, Calpine supports the following recommendations and principles for Commission consideration:

- Weather emergency preparation standards that match the requirements of Texas Utilities Code §35.0021(b), which are preparation and not a performance standard.
- Clear and auditable guidelines and standards for compliance, based on good utility practice, that are consistent with the requirement that ERCOT be able to inspect generation assets for compliance pursuant to Texas Utilities Code §35.0021(c).
- Flexibility at the implementation level with the ability to develop plant specific plans reviewable by ERCOT.
- Inclusion of a reasonable timeline for compliance and an extension process.
- Exclusion option, based on economic criteria, or size or another measurable standard that would allow a facility to be granted an exclusion if the benefits of the weatherization do not outweigh the costs.
- Funding should be available so that the standards to do not drive early retirements.

A general standard that is then implemented through enactment of recommendations contained in guidelines, is consistent with similar requirements in other regions, including the CAISO[4] and PJM,[5] and is further supported by the national NERC requirements. In evaluating any standard, the Commission should recognize that generators operate within an entire system: gas supply, pipelines, transmission, distribution, system control, loads, and so forth. It would be wrong to focus on any one of these components in a silo, and anything done should be carefully balanced with efforts as to other aspects of that entire system. No one component of this system can be an insurer of reliability.

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[3] NERC, *Reliability Guideline Generating Unit Winter Weather Readiness – Current Industry Practices – Version 3*, approved by the Reliability and Security Technical Committee on December 15. 2020.

[4] California Electric Generation Facilities Standards Committee, *Operation Standards and Recommended Guidelines for Generating Asset Owners* (Oct. 27, 2004), *available at* https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Safety/Electric_Safety_and_Reliability/Filings/FinalOpStandardsandGuidelines.DOC.

[5] PJM Operations Planning Division, *PJM Manual 14D: Generator Operational Requirements (Revision 55)* (May 26, 2021), *available at* https://www.pjm.com/-/media/documents/manuals/m14d.ashx.

As the Commission further reviews and analyzes these issues, Calpine urges it to evaluate the framework for compliance and determine what standard should be in place, how any standard will be evaluated, and by whom. A company that implements guidelines applicable to its facilities' and their equipment, should be able to clearly understand if their program is compliant. The implementation of a review program by ERCOT will require training of inspectors and dialogue with generators to ensure that inspectors understand the generation facilities that they will be reviewing.

A. Texas Utilities Code § 35.0021(b) is a Preparation Standard

Texas Utilities Code § 35.0021(b) requires generators, "*to implement measures to prepare* the provider's generation assets to provide adequate electric generation service during a weather emergency according to reliability standards adopted by the commission" (emphasis added). ERCOT has more than 700 generation units located across a wide range of climates, geography, and weather conditions that span more than 800 miles from Brownsville to Abilene and 500 miles from Houston to Big Bend. A standard that seeks to ensure electric generation service across the state during various extreme weather conditions must be comprehensive; however, the details should be incorporated into guidelines that can be quickly and easily amended based on good utility practice. Calpine supports a weather emergency standard such as, "Generation providers shall prepare facilities for reasonably anticipated severe weather conditions." Such a standard could be incorporated into 16 Tex. Admin. Code § 25.503. Oversight of Wholesale Market Participants and the guidelines to meet the standards to address temperature, icing, wind, flooding, and drought conditions could be incorporated into ERCOT operating guides or other binding documents that could end be adjusted over time. Moreover, this requirement is consistent with the operating and maintenance standards Calpine experiences in other competitive wholesale markets.

B. Auditable Standards Needed for Generator Compliance

Texas Utilities Code § 35.0021(c) creates a requirement for ERCOT to inspect generation for compliance with the reliability standards. Along with the development of guidelines to meet the preparation standard, Calpine asks that the Commission require that ERCOT affirmatively state when a generator has complied with the standard with a certificate of compliance. Such a certificate should be deemed to meet the compliance needs of the Commission rule unless the reliability standard changes. Additionally, it is important that the individuals inspecting the generation facilities are properly trained and understands how each generation resource works.

2. ***To fulfill the requirements of Texas Utilities Code § 38.075(a), under what weather emergency conditions should the Commission require an electric cooperative, municipally owned utility, or transmission and distribution utility providing transmission service in the ERCOT power region to be able to operate its transmission facilities? At a minimum, please address standards for temperature, icing, wind, flooding, and drought conditions. For each, please address whether the standard should vary by region or by type of generation facility. Please provide any relevant support for your recommendations, including existing or proposed standards in other jurisdictions, or related studies.***

Calpine believes the Commission should thoroughly evaluate and consider all recommendations related to transmission and distribution service provider ("TDSP") weatherization and their potential impacts on overall transmission costs within the state. As the Quanta Report pointed out, distribution (and maybe transmission) improvements are not generally cost-effective, nor do they lead to significant increased reliability during a winter storm.[6] Any recommendations regarding TDSP weatherization should be viewed with the lens of ensuring the recommendation actually help Texas maintain grid reliability during an extreme weather event, and not merely an opportunity to increase the rate base.

[6] Quanta Report at 27 and 49-52.

Importantly, neither NERC nor Quanta recommended transmission or distribution weatherization upgrades after the 2011 winter event. Transmission and distribution operators must already comply with NERC Reliability Standards, including those requiring operation during extreme weather. TDSPs may recover all related compliance costs, as well as capital costs incurred to harden their systems, either through transmission cost of service ("TCOS") rates, non-bypassable delivery rates, or a combination thereof. As contrasted with power generation companies, which lack a cost recovery mechanism, the TDSPs can socialize all such incremental compliance costs. They therefore would be indifferent or even supportive of the maximum possible standards, without regard to whether such standards make sense from a cost-benefit standpoint. The Commission should consider that factor in determining applicable transmission and distribution weatherization standards.

Additionally, the Commission should be mindful of adopting any proposals that would encourage large loads to leave the ERCOT system. The Commission has already seen transmission cost avoidance negatively impacting the system. Adopting weatherization requirements that will increase costs that can likewise be avoided through departing the ERCOT system, will encourage further load departure and will not improve reliability of the system overall.

III. Conclusion

Calpine remains committed to emphasizing and improving its weatherization process within ERCOT as required. We appreciate this opportunity to present our views on this very important matter and will remain engaged as this Project develops. We will make available representatives to discuss these positions if helpful to the Commission.

Respectfully submitted,

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